

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 15 APR 2004

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Applicant's or agent's file reference 151447/HTKR	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCTNO 02/00304	International filing date (day/month/year) 30.08.2002	Priority date (day/month/year) 30.08.2002
International Patent Classification (IPC) or both national classification and IPC H04L7/00		
Applicant TELEFONAKTIEBOLAGET LM ERICSSON et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 16.03.2004	Date of completion of this report 14.04.2004
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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/NO 02/00304**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1-9 as originally filed

Claims, Numbers

1-11 as originally filed

Drawings, Sheets

1/4-4/4 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	1-11
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations

see separate sheet

V- Reasoned Statement

1. The following documents are cited:
D1: WO 98 25367 A (DSC COMMUNICATIONS AS ;NIELSEN ANDERS BOEJE (DK)) 11 June 1998 (1998-06-11)
D2: DATABASE WPI Section EI, Week 200047 Derwent Publications Ltd., London, GB; Class U23, AN 2000-519766 XP002237855 & JP 2000 201068 A (NEC CORP), 18 July 2000 (2000-07-18)
2. The subject-matter of claim 1 of the present invention is concerned with a method in a telecommunication or data network of reducing phase jumps in a frame synchronisation signal when switching from a first original reference signal to a second reference signal. As the phase of the two clocks may be different, switching from one to the other may cause a phase jump. D1 deals with this problem by using a digital error signal generated in response to the difference in phases of the two clocks. This phase difference signal is transferred to a central numerically controlled oscillator onto which the system clock is locked. In D2, a reference clock is divided by two and if necessary used to invert the other reference clock. In claim 1 of the present application, a different approach is taken. The two incoming reference clocks are multiplied by a factor n to create clocks of a higher frequency. One of these higher frequency clocks is then selected. Following selection, the selected higher frequency clock is then divided by n again, resulting in a lower frequency clock. If the selection takes place within a lower frequency clock period, the resulting clock phase jump is only one n^{th} of the lower frequency clock period or less. Thus the result is achieved with minimal circuitry. The features of claim 1 are not found in either of the documents cited. Thus claim 1 involves an inventive step and meets the requirements of Articles 33(2) and (3) PCT.
3. The subject-matter of independent claim 6 is essentially the same as that of claim 1, but expressed in terms of apparatus features. Thus for the same reasons outlined above, claim 6 also meets the requirements of Articles 33(2) and (3) PCT.
4. The subject-matter of dependent claims 2 to 5 and 7 to 11 includes features which further restrict the scope of claims 1 and 6 respectively. As a result, these claims also meet the requirements of Articles 33(2) and (3) PCT.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. **PCT/NO02/00304**

5. The following deficiencies are found in the application. If applicable they should be remedied when entering a regional phase (e.g. application for a European patent):
- a) The claims do not meet the requirements of Rule 6.2(b) PCT in that they do not contain reference signs.
 - b) The independent claims do not meet the requirements of Rule 6.3(b) PCT in that they are not divided into the two-part form.
 - c) The most relevant of the documents cited in the International Search Report should be referenced and briefly discussed in the description, Rule 5.1(a)(ii), PCT.